

#5



PCT10

ENTERED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/070,882

DATE: 03/21/2002

TIME: 15:40:56

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\03212002\J070882.raw

```

3 <110> APPLICANT: Titball, Richard L.
4   Bullifent, Helen L.
6 <120> TITLE OF INVENTION: Recombinant Microorganisms
8 <130> FILE REFERENCE: 41577/270459
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/070,882
C--> 10 <141> CURRENT FILING DATE: 2002-10-11
10 <150> PRIOR APPLICATION NUMBER: GB 9921275.5
11 <151> PRIOR FILING DATE: 1999-09-10
13 <150> PRIOR APPLICATION NUMBER: PCT/GB00/03402
14 <151> PRIOR FILING DATE: 2000-09-06
16 <150> PRIOR APPLICATION NUMBER: GB 0017000.1
17 <151> PRIOR FILING DATE: 2000-07-12
19 <160> NUMBER OF SEQ ID NOS: 12
21 <170> SOFTWARE: PatentIn version 3.1
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 196
25 <212> TYPE: DNA
26 <213> ORGANISM: Salmonella typhimurium
28 <400> SEQUENCE: 1
29 cgcccaatac gcaaaccgcc tctccccgcg cgttggccga ttcattaatg cagctggcac      60
31 gacaggtttc ccgactggaa agcgggcagt gagcgcaacg caattaatgt gagttagctc      120
33 actcattagg caccocaggc tttaactttt atgcttcocg ctcgtatggt gtgtggaatt      180
35 gtgagcggat aacaat                                     196
38 <210> SEQ ID NO: 2
39 <211> LENGTH: 139
40 <212> TYPE: DNA
41 <213> ORGANISM: Salmonella typhimurium
43 <400> SEQUENCE: 2
44 gtgactctgg tcgacgaact taaataatgc ctgcctcacc ctcttttctt cagaaagagg      60
46 gtgactattt gtctggttta ttaactgttt atcccccagg caccataatc aacgctagac      120
48 tgttcttatt gttaacaca                                     139
51 <210> SEQ ID NO: 3
52 <211> LENGTH: 715
53 <212> TYPE: DNA
54 <213> ORGANISM: Salmonella typhimurium
56 <400> SEQUENCE: 3
57 gttaaccact cttaataata atgggtttta tagcgaaata gactttttta tcgcgtgttc      60
59 aatatttgcg ttagttatta tttttttgga atgtaaattc tctctaaaca caggtagatat      120
61 ttatgttgga attgtggtgt tgattctatt cttataatat aacaagaaat gttgtaactg      180
63 atagatatat taaaagatta aatcggagcg ggaataaagc gtgctaagca tcatcgtgaa      240
65 tatgattaca cgccctgcga tggcatataa ccgtattgcg gatggagcgt cacgtgagga      300
67 ctgtgaagca caatgcgata tgttctgatt atatggcgag tttgcttaat gacatgtttt      360
69 tagccgaacg gtgtcaagtt tcttaatgtg gttgtgagat tttctcttta aatatcaaaa      420

```

RAW SEQUENCE LISTING

DATE: 03/21/2002

PATENT APPLICATION: US/10/070,882

TIME: 15:40:56

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\03212002\J070882.raw

```

71 tgttgcatgg gtgatttggt gttctatagt ggctaaacac tttatggttt ctgttaaata 480
73 tatatgcgtg agaaaaatta gcattcaaat ctataaaagt tagatgacat tgtagaaccg 540
75 gttacctaaa tgagcgatag agtgcttcgg tagtaaaaat atctttcagg aagtaaacac 600
77 atcaggagcg atagcgggtga attattcgtg gttttgtcga ttcggcatag tggcgataac 660
79 tgaatgccgg atcgggtactg cagggtgtta aacacaccgt aaataataag tagta 715
82 <210> SEQ ID NO: 4
83 <211> LENGTH: 371
84 <212> TYPE: DNA
85 <213> ORGANISM: Salmonella typhimurium
87 <400> SEQUENCE: 4
88 taaacagaca ttcagaagtg aatgacggta ataaataaag ttaatgatga tagcggtcac 60
90 tatttttagtt gcgaatgaag attctgtttt atcattcagt gctatgaatt tcatcaattt 120
92 aaccggttga ttttaaaagt ttctgtgaaat atattttgtc tatttgtgct tatttttact 180
94 tgatttttgc tttaaaaaag ttccgtaaaa ttcatatattt gaaacatcta tatagataac 240
96 tgtaacatct taaaagtttt agtatcatat tcgtgttgga ttattctgta tttttgcgga 300
98 gaatggactt gccgactggt taatgagggt taaccagtaa gcagtggcat aaaaaagcaa 360
100 taaaggcata t 371
103 <210> SEQ ID NO: 5
104 <211> LENGTH: 36
105 <212> TYPE: DNA
106 <213> ORGANISM: Escherica coli
108 <400> SEQUENCE: 5
109 aaggaaaaaa gcggccgccc cccaatacgc aaaccg 36
112 <210> SEQ ID NO: 6
113 <211> LENGTH: 33
114 <212> TYPE: DNA
115 <213> ORGANISM: Escherica coli
117 <400> SEQUENCE: 6
118 gaattcacta gtattgttat ccgcgctcac aat 33
121 <210> SEQ ID NO: 7
122 <211> LENGTH: 39
123 <212> TYPE: DNA
124 <213> ORGANISM: Salmonella typhimurium
126 <400> SEQUENCE: 7
127 aaggaaaaaa gcggccgctg actctggctg acgaactta 39
130 <210> SEQ ID NO: 8
131 <211> LENGTH: 35
132 <212> TYPE: DNA
133 <213> ORGANISM: Salmonella typhimurium
135 <400> SEQUENCE: 8
136 ctagtctaga tgtgttaacc aataagaaca gtcta 35
139 <210> SEQ ID NO: 9
140 <211> LENGTH: 42
141 <212> TYPE: DNA
142 <213> ORGANISM: Salmonella typhimurium
144 <400> SEQUENCE: 9
145 aaggaaaaaa gcggccgcta aacagacatt cagaagtga tg 42
148 <210> SEQ ID NO: 10
149 <211> LENGTH: 34

```

RAW SEQUENCE LISTING

DATE: 03/21/2002

PATENT APPLICATION: US/10/070,882

TIME: 15:40:56

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\03212002\J070882.raw

150 <212> TYPE: DNA
151 <213> ORGANISM: Salmonella typhimurium
153 <400> SEQUENCE: 10
154 ctagtctaga atatgccttt attgcttttt tatg 34
157 <210> SEQ ID NO: 11
158 <211> LENGTH: 41
159 <212> TYPE: DNA
160 <213> ORGANISM: Salmonella typhimurium
162 <400> SEQUENCE: 11
163 aaggaaaaaa gcggccgcgt taaccactct taataataat g 41
166 <210> SEQ ID NO: 12
167 <211> LENGTH: 28
168 <212> TYPE: DNA
169 <213> ORGANISM: Salmonella typhimurium
171 <400> SEQUENCE: 12
172 ctagactagt tactacttat tatttacg 28

VERIFICATION SUMMARY

DATE: 03/21/2002

PATENT APPLICATION: US/10/070,882

TIME: 15:40:57

Input Set : A:\Sequence.txt

Output Set: N:\CRF3\03212002\J070882.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date